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A  
COMPENDIUM OF ANATOMY;

OR, A  
POCKET COMPANION

FOR STUDENTS

IN

SURGERY,

AND THE ARTS OF

*Designing, Painting, and Sculpture:*

ILLUSTRATED BY

TWELVE PLATES;

IN WHICH THE

BONES and MUSCLES of the HUMAN BODY

Are represented as they appear in the best chosen Attitudes, when cleared of the Skin, Adipose Membrane, Veins, and Arteries; accurately delineated from the most approved Tables and Figures extant : with a concise, yet clear Explanation of their respective

*Names, Origins, Insertions, and Uses.*

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THE FOURTH EDITION, IMPROVED AND ENLARGED.

Price Two Shillings and Sixpence.

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## P R E F A C E.

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THE former Editions of this Work having been chiefly designed for Artists, related only to the Skeleton, and external Muscles; but the Utility of it, and the rapid Sale among Surgeons as well as Artists, have induced the Publisher to make it more advantageous to both Professions, by giving four additional Figures, which show the front and back View of two other Layers of Muscles, more deeply seated.

To the Medical Student nothing need be said concerning the absolute Necessity of his Acquaintance with the Structure of the Human Body. The Utility of this little Work will therefore be too obvious to him, in the Pursuit of his Anatomical Studies, to require particularly insisting on, as he will here find the Names, Origins, Insertions, and Uses of the Muscles, accurately described and delineated from the best Authors; and at one View will obtain a Knowledge of their Shape and relative Situation.

For the Artist, the Human Body being the noblest and most common Subject he has to study, a general Knowledge of

Anatomy is indispensably necessary, in order to his acquiring Eminence in his Profession.

The Ancients entertained so high an Opinion of this Knowledge, as to esteem it the most essential Qualification of a good Painter or Statuary. And among the Moderns, *Michael Angelo*, *Raphael*, *Bacchio Bandinelli*, *Daniel Valtierra*, *Pierrino del Vaga*, *Roffo* of Florence, *Francisco Salviati*, and others, have been indebted, for the Firmness of their Designs, to their Skill in ANATOMY.

It may, by some, be thought unnecessary to load the Mind with a critical Study of ANATOMY; yet it is certainly true; that it is impossible to make a true and perfect Outline even from the Life itself, without this Knowledge; because, not knowing the Office of the Muscles, the Artist cannot tell which ought to appear swelled, and which not, that depending on their Office and Action. To evince this Truth we will consider the Nature of the Muscles, and of muscular Motion. A Muscle is composed of a great Number of fleshy Fibres, like Threads, running parallel to each other, wrapped up and kept together by one common Membrane; its Middle is fleshy, its Origin and Insertion generally tendinous; and this last being fixed to a Bone, draws it towards the Place of the Origin of the Muscle. When the Muscles act, they contract in Length, and swell in Thickness and Breadth; consequently, in every Attitude, those Muscles will seem most swelled, and the Separation from the neighbouring Muscles appear strongest, that act in bringing the Body to that Attitude, while the other Muscles



Muscles will appear comparatively flat. But as no living Model can continue any Length of Time in the Attitude wherein he is placed; and before the Artist has finished his Sketch, he grows weary, the Muscles become languid and flat, and he is obliged to have Recourse to a Cord or Staff, to support himself in the Attitude required. When this is the Case, notwithstanding the Body and Limbs may remain in nearly the same Position, yet the Muscles that properly belong to the Action are not the most swelled, but those that act in making use of the Cord or Staff for the Support, for which Differences a Painter ought to be able to account, and treat his Subject accordingly.

A young Artist should endeavour to attain a Freedom of Handling, and a tolerable Knowledge of Light and Shade, by drawing after Figures of Plaster of Paris, and then apply himself to the Study of ANATOMY, so far as it relates to his Profession. By this Means he will profit more by drawing after Life in one Season, than otherwise he could do in many Years.

The Want of proper Assistance on this Subject is the principal Reason why ANATOMY is so little studied by Painters, &c. To remedy this Difficulty, a short Folio Treatise was published some Years ago, and recommended to Students at the Royal Academy, by the then Keeper, Mr. MOSER. But that being inconveniently large, it is the Design of this to remove that Objection; and as it contains all the Muscles of the human Body, explained in a concise, yet so clear a Manner, any that apply attentively to it for a short Time may attain such a  
 Knowledge

Knowledge of ANATOMY as will be of the greatest Service to him in the Prosecution of his Studies.

In the Study of ANATOMY, the best Method a young Artist can follow, is to learn the Names, Shapes, Proportion, Situation, and Manner of the Bones joining each other; the Shape and Situation of the Muscles; their Names, Origin, Insertion, and Use; afterwards to compare them with some good anatomical Figure in Plaster of Paris, and to draw from it on every Side; and, lastly, to compare his Performances with the Life, by setting a very muscular Man in such Attitudes as will best show the Muscles he is in Doubt about.

All the Figures in this Work are from one or other of those well-known anatomical Works of *Albinus*, *Cowper*, and *Vesalius*, except the first of the Muscles, which is from an original Drawing made by the late Mr. *A. Walker*, of the Figure dissected by the celebrated Dr. *Hunter*, for the Academy (at that Time in *St. Martin's Lane*), before the Mould was taken, in which the Figure now at the Royal Academy was cast; and they have all been correctly examined and compared with the best anatomical Figures.



*These Letters of Reference serve for all the Skeletons.*

- |   |   |
|---|---|
| <p>A Os Frontis, or Bone of the Forehead.</p> <p>B Offa Bregmatis.</p> <p>C Os Temporum.</p> <p>D Os Occipitis, or back Part of the Head.</p> <p>a The Mastoidic Process.</p> <p>E Os Jugale.</p> <p>F The Upper Jaw.</p> <p>G The Lower Jaw.</p> <p>H The Clavicula, or Collar Bone.</p> <p>I The Sternum, or Breast Bone.</p> <p>K The 7 Vertebrae of the Neck.</p> <p>L The 12 Vertebrae of the Ribs.</p> <p>M The 5 Vertebrae of the Loins.</p> <p>1 to 7 The 7 true Ribs.</p> <p>8 to 12 The 5 false Ribs.</p> <p>N The Scapula, or Shoulder Blade.</p> <p>b The Coracoide Process of the Scapula.</p> <p>c The Acromium of the Scapula.</p> <p>d The Spine of the Scapula.</p> <p>e The Base of the Scapula.</p> <p>O The Humerus, or Bone of the Arm.</p> <p>f The Head of the Humerus.</p> <p>g A Sulcus, or Furrow, in which passes one of the Heads of the Biceps.</p> <p>h The outer Protuberance of the Humerus; from which arise the Muscles that extend the Wrist and Fingers.</p> <p>i The inner Protuberance; from which arise the Muscles that bend the Wrist and Fingers.</p> <p>P The Radius } The Bones of</p> <p>Q The Ulna } the Fore-arm.</p> <p>k The Olecranon, or Tip of the Elbow.</p> | <p>R The Bones of the Carpus, or Wrist.</p> <p>S The Bones of the Metacarpus, or Hand.</p> <p>T The Bones of the Thumb.</p> <p>U The Bones of the Fingers.</p> <p>W Os Sacrum.</p> <p>X Os Coccygis.</p> <p>Y Os Ilium.</p> <p>l The Spine of the Ilium.</p> <p>Z Os Ischium.</p> <p>m The Obtuse Process of the Ischium.</p> <p>A Os Pubis.</p> <p>B The Femur, or Thigh Bone.</p> <p>n The Head of the Femur.</p> <p>o The great Trochanter.</p> <p>p The lesser Trochanter.</p> <p>q The Linea Aspera, or Spine of the Femur.</p> <p>r The inner Protuberance of the Femur.</p> <p>s The outer Protuberance of the Femur.</p> <p>C The Patella, or Knee Pan.</p> <p>D The Tibia, the largest Bone of the Leg.</p> <p>E The Fibula.</p> <p>t The lower Appendix of the Fibula, or inner Ankle.</p> <p>u The lower Appendix of the Fibula, or outer Ankle.</p> <p>F The Os Calcis, or Bone of the Heel.</p> <p>G The Tarsus, or Instep, composed of six Bones, besides the Os Calcis.</p> <p>H Bones of the Metatarsus, or Foot.</p> <p>I Bones of the Toes.</p> |
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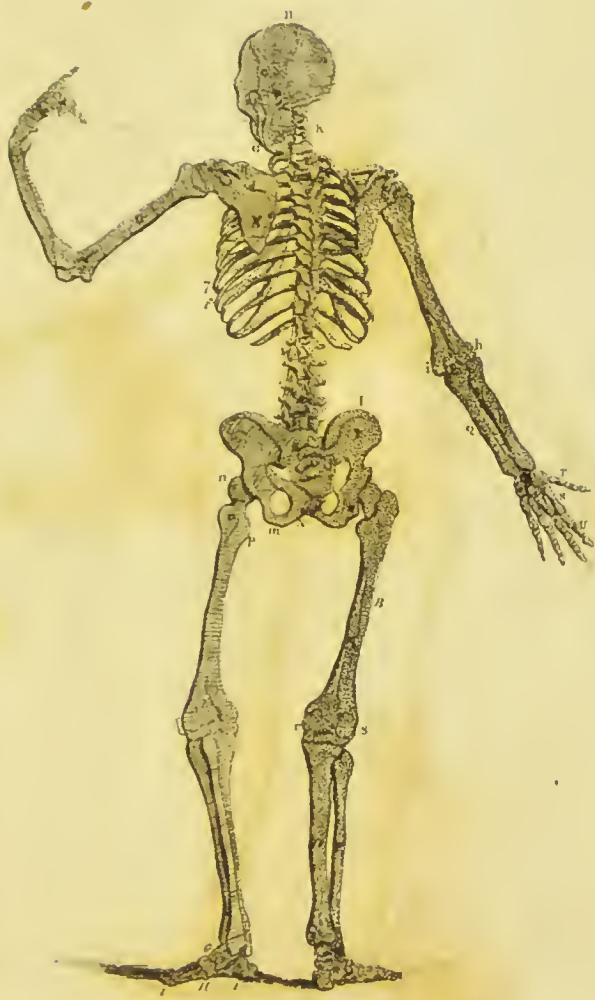








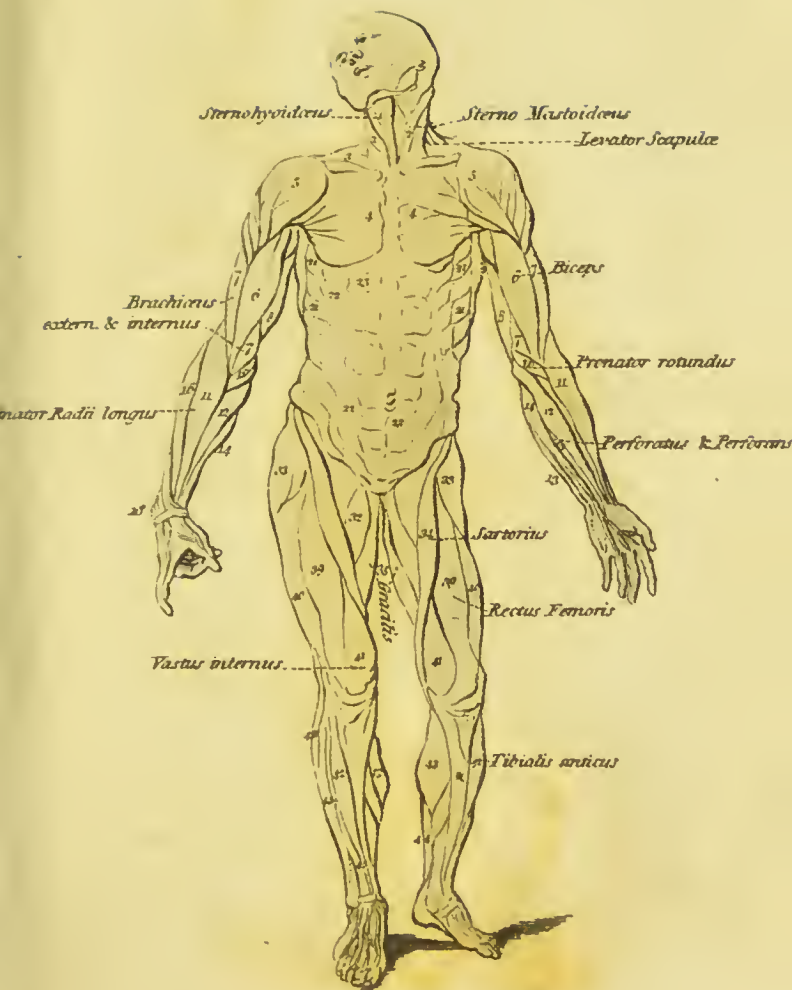








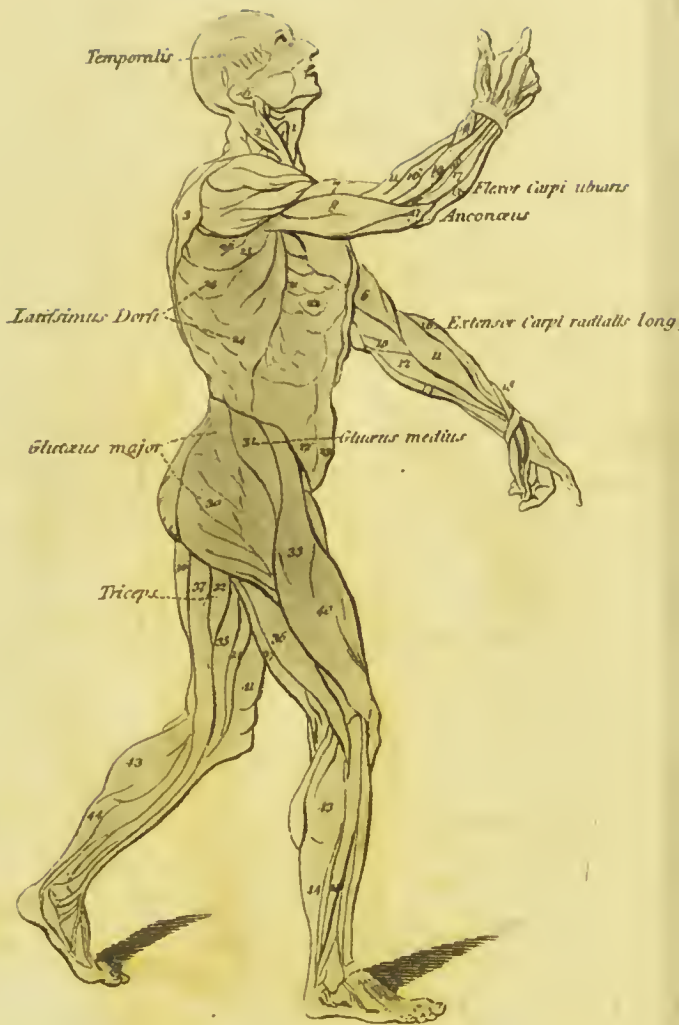


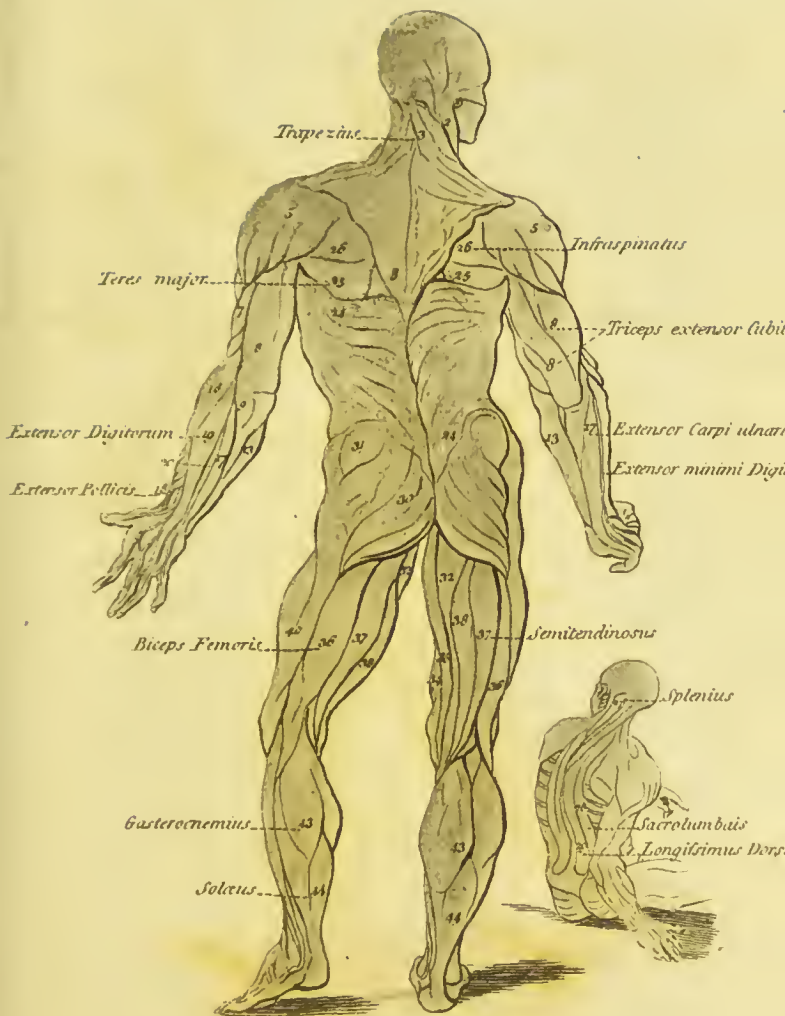




















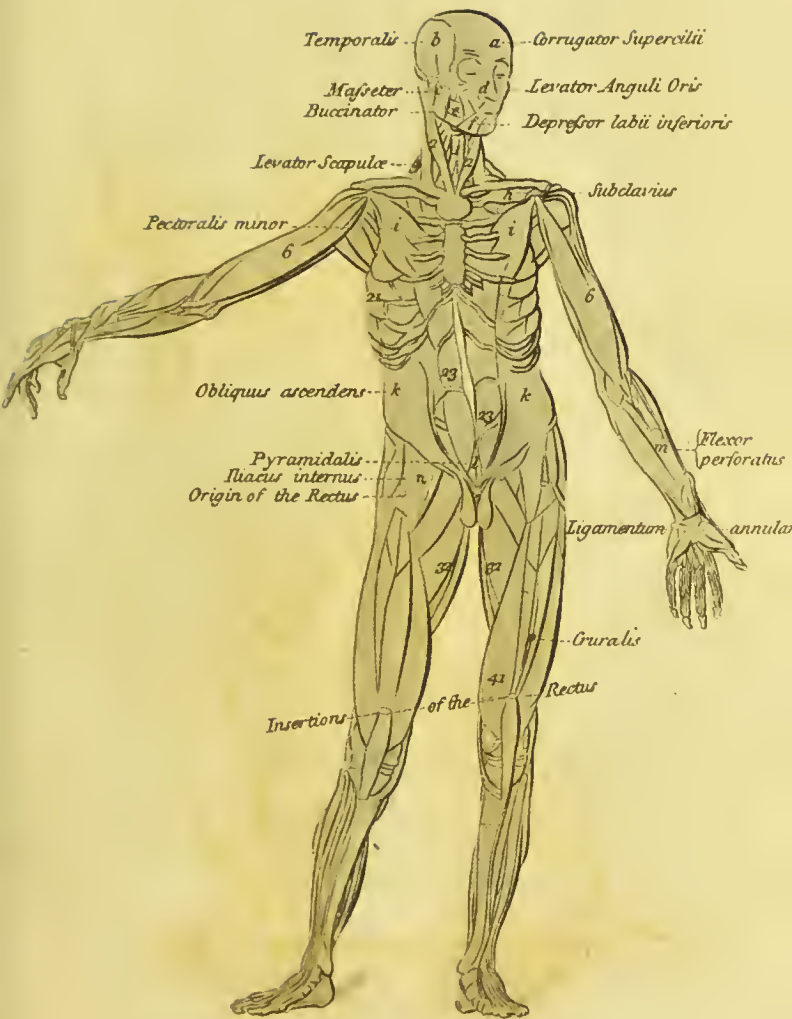
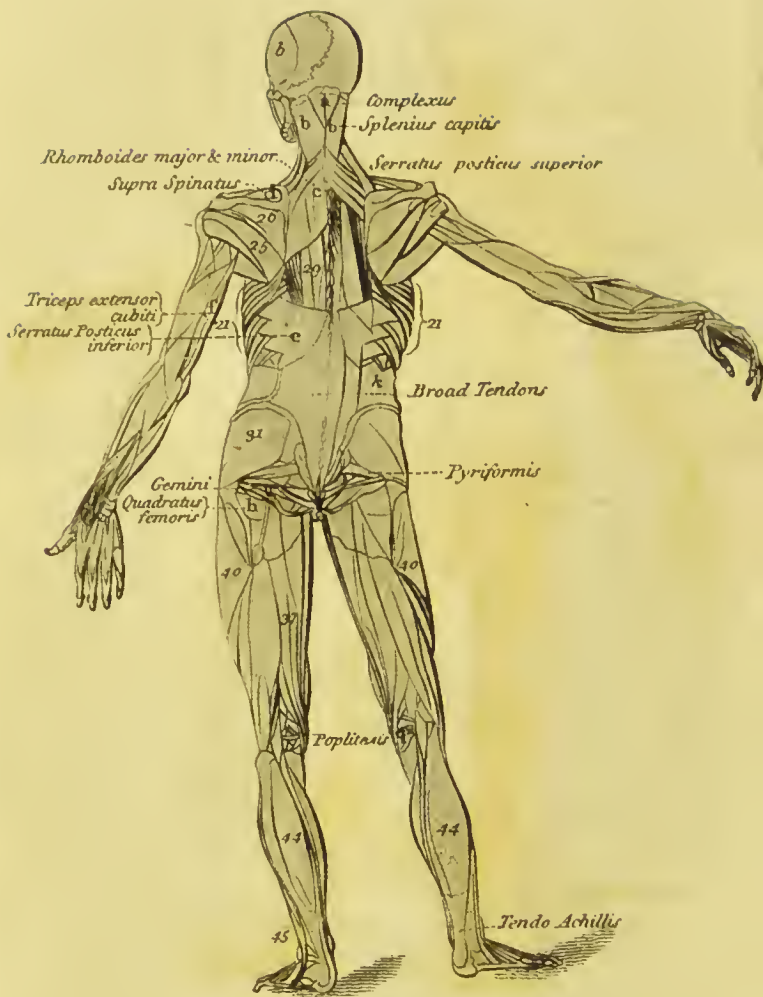
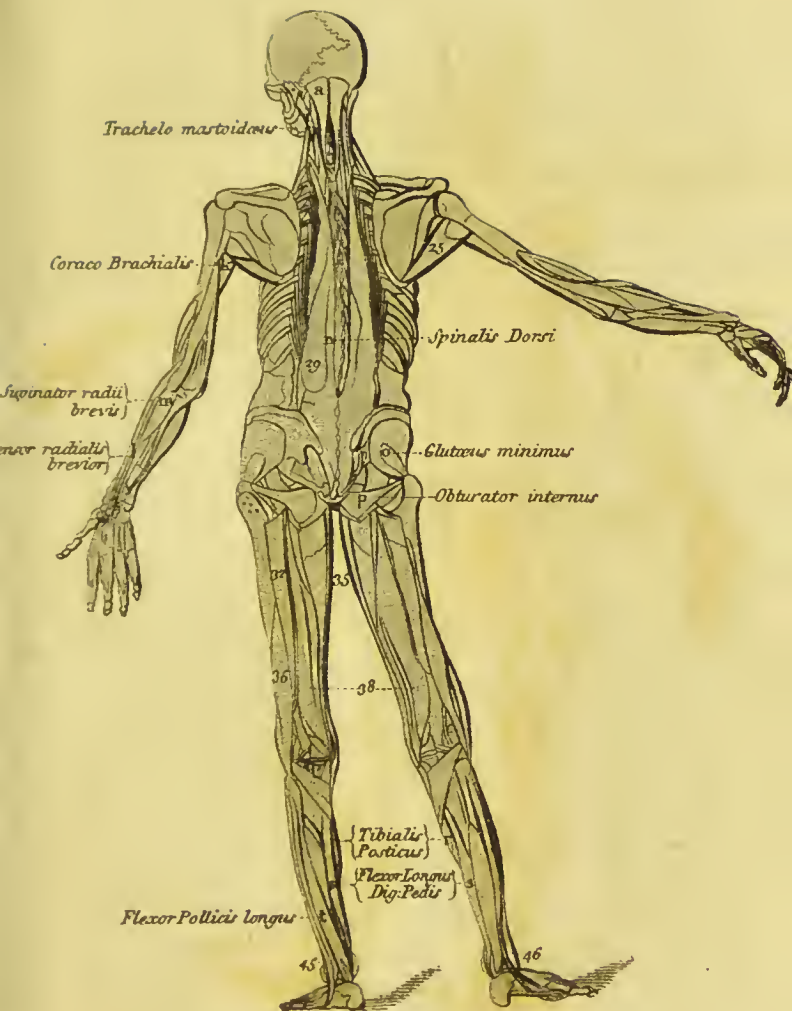






Fig : X.

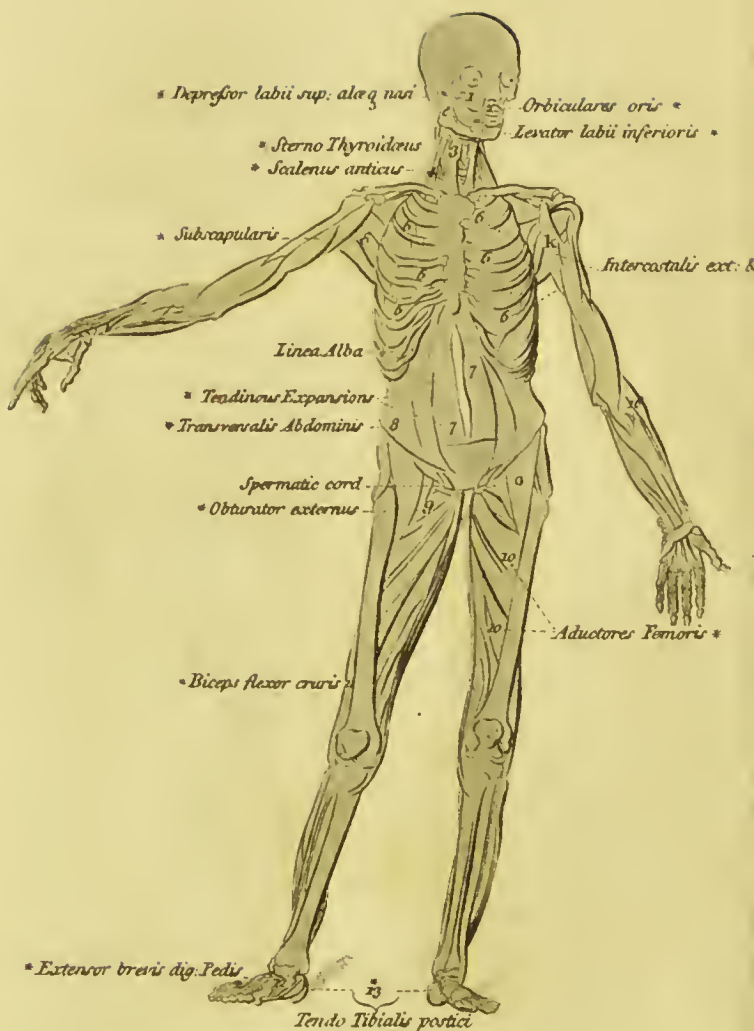












# THE COMPENDIUM of ANATOMY.

In order to distinguish the different Layers of Muscles in this Work, the following Method is adopted: The external Muscles are referred to with Figures; and the ninth Plate, which is the Front View of the next Layer of Muscles, is referred to with the Italic Alphabet. Plate X. the Back of the same Figure, with the Roman Alphabet, which is continued in Plate XI. representing the inner Layer of Muscles; and the Front View of the inner Layer, Plate XII. is distinguished by Figures and a \*.

## Name, Origin, Insertion, and Use of the Muscles.

- |   |   |
|---|---|
| <p>1. <b>STERNOHYOIDÆUS</b> arises from the sternum and clavícula, and is inserted into the base of the os hyoides†.</p> <p>2. <i>Sterno-Mastoideus</i> arises from the sternum, and part of the clavícula, and is inserted into the outer part of the mastoid process.</p> <p>3. <i>Trapezius</i> arises from the hinder part of the head, from the spines of the vertebræ of the neck, and the eight upper ones of the back; is inserted into the spine and acromium of the scapula and the clavícula.</p> <p>4. <i>Pectoralis</i> arises from part of the clavícula, the sternum, and the six upper ribs; and is inserted by a strong tendon into the humerus, four fingers breadth below its head.</p> <p>5. <i>Deltoides</i> arises from part of the clavícula, from the acromium and spine of the scapula: it is com-</p> | <p>1. Draws the os hyoides downwards. The action of this muscle is hardly perceivable.</p> <p>2. Draws the head downwards and sideways.</p> <p>3. Moves the scapula upwards, backwards, and downwards. This muscle, passing over the scapula, contributes very much to give a certain roundness which we see in that part.</p> <p>4. Draws the arm forwards.</p> <p>5. Raises the arm, and assists in every motion, except that of depressing it.</p> |
|---|---|

† *Os hyoides* is a small bone in the throat, never preserved in the artificial skeleton.

posed of several lobes or parcels of flesh, which all join in one tendon, and are inserted into the humerus, four fingers breadth below its head.

6. *Biceps* hath two heads; one arising from the upper edge of the head of the scapula, the other from the processus coracoides of the scapula; both distinctly seen with their union about the middle of the arm, in Fig. IX. and make one belly, which is inserted by a strong round tendon into the tuberosity at the upper end of the radius.
7. *Brachialis internus* is partly covered by the biceps, and is marked with two figures. It arises from the middle and internal part of the humerus; and is inserted into the upper and fore part of the ulna.
8. *Triceps Extensor Cubiti* is composed of the brachialis externus, the musculus longus, and the musculus brevis. These three joined, make one tendon, which covers the elbow, and is inserted into the hind part of the olecranon.
9. *Anconæus* riseth from the back part of the outer protuberance of the humerus, and is inserted into the ulna, four fingers breadth below the olecranon.
10. *Pronator rotundus* rises from the inner protuberance of the humerus, where those bending the wrist and fingers arise; and descends obliquely to its insertion, a little above the middle of the radius.
11. *Supinator Radii longus* riseth a little above the outer protuberance of the

6. Bends the fore arm.

7. Bends the fore arm.

8. Bends the fore arm.

9. Helps to extend the arm.

10. Turns the palm of the hand downward.

11. Turns the palm upward.

humerus

- humerus, and is inserted into the lower part of the radius.
12. *Flexor Carpi radialis* hath its rise from the inner protuberance of the humerus, and upper part of the ulna, and is inserted into the first bone of the metacarpus, that sustains the fore finger.
13. *Flexor Carpi ulnaris* ariseth from the inner protuberance of the humerus, and is inserted into the inner little bone of the wrist.
14. *Palmaris* rises with the former, and passing by a slender tendon to the palm of the hand, expands itself, and is inserted into the bones of the metacarpus, and the first bones of the fingers.
15. *Perforatus* and *Perforans*. The first rises from the inner protuberance of the humerus and the radius, and is divided into four tendons, which are inserted into the second bone of the fingers. Just above their insertion they are perforated, to give passage to the tendons of the perforans, which arises from the upper part of the ulna, and is divided into four tendons, that pass through the former, and are inserted into the third bones of the fingers.
16. *Extensor Carpi radialis* ariseth from the outer protuberance of the humerus, and is inserted into the bones of the metacarpus, which sustain the fore and middle fingers.
17. *Extensor Carpi ulnaris* rises from the same place with the former, and is inserted into the bones of the me-
12. Bends the wrist.
13. Bends the wrist and little finger.
14. Helps the hand to grasp any thing.  
N. B. The muscles of the fore arm are never marked strong, but when the hand grasps something hard.
15. They bend the fingers.
16. Extends the wrist.
17. Extends the wrist.

- tacarpus, which sustain the little finger.
13. *Extensor Pollicis* rises from behind the middle part of the radius and ulna, and passes over the tendon of the extensor radialis, and is inserted by two or three tendons into the bones of the thumb.
18. Extends the thumb.
19. *Extensor Digitorum* arises from the outer protuberance of the humerus, and from the hinder part of the radius and ulna. At the wrist it is divided into three tendons, which are inserted into the bones of the three first fingers.
19. Extends the fingers.
20. *Extensor minimi Digiti* arises from the outer protuberances of the humerus, and from the upper part of the ulna, and is inserted into the third bone of the little finger.
20. Extends the little finger.
21. *Serratus major anticus* arises from the six lower true ribs, and from the first, and sometimes second false ribs, by so many distinct portions, resembling the teeth of a saw, and is inserted into the base of the scapula. A part of this muscle is only seen, the rest being covered by the pectoralis.
21. Draws the scapula forwards and downwards. It assists in respiration, in extraordinary difficulties. When the scapula is drawn upwards, and backwards by the trapezius, this muscle being so fixed, raises the ribs.
22. *Obliquus descendens* arises from the two last true ribs, and the five false, by five or six digitations; the four uppermost lie between the teeth of the serratus. It descends obliquely by a broad and thin tendon; and passing under the rectus, is inserted all along the linea alba, to the upper and fore part of the spine of the
22. Assists in expiration.

ilium, and to the fore part of the os pubis.

23. *Rectus* rises from the sternum, and the two last true ribs, and is inserted into the os pubis.
24. *Latissimus Dorsi* arises from the hind part of the spine of the ilium, the upper spine of the os sacrum, from all the spines of the vertebræ of the loins, and from the seven lower ones of the back. It passes by the lower angle of the scapula, to which some of its fibres are fixed, and joining with the *teres major*, is inserted into the humerus, three fingers below its head.
25. *Teres major* arises from the lower angle of the scapula, and is inserted with the former.
26. *Infraspinatus* rises from the cavity below the spine of the scapula, and filling that cavity, is inserted into the humerus, a little below its head.
27. *Splenius* arises from the three lower vertebræ of the neck, and five upper ones of the back, and is inserted above the mastoid process.
23. Raises the body when lying on the back, and sustains it when bent back. It has three or four bands which divide it, and make it appear like several muscles. They are not always alike, the third being in some higher, in others even with the navel, and in some bodies below it.
24. Helps to draw the arm down, and obliquely backward: it is so thin at its origin, that the muscles under it may be seen, but at its insertion is fleshy.
25. Helps to draw the arm downwards and backwards.
26. Draws the arm downwards and backwards.
27. Draws the head backwards and sideways.

28. *Sacrolumbalis* ariseth from the upper part of the os sacrum, and back part of the spine of the ilium, and is inserted into the back part of the ribs, near their root.

29. *Longissimus Dorsi* rises from the same origin as the former, and is inserted partly into the processes of the vertebræ of the back, and partly into the ribs.

28 } These muscles keep  
29 } the body erect,  
bend it back wards,  
and sustain it when  
bent forwards; and  
when they act only  
on one side, they  
draw the body side-  
ways.

Although the three last mentioned muscles are entirely covered by the trapezius and the latissimus dorsi, their shape and action may be plainly seen, as shown in the small figure, by the side of Figure VII.

30. *Glutæus major* arises from the external surface of the ilium and ischium, from the os coccygis and os sacrum, and is inserted into the thigh bone, a hand's breadth below the great trochanter.

30. Extends the thigh.

31. *Glutæus medius* rises from the external surface of the ilium and ischium, and is inserted into the great trochanter.

31. Helps to extend the thigh.

32. *Triceps* hath three heads; two of them arise from near the articulation of the os pubis, the other from the tubercle of the ischium, and are inserted all along the spine of the femur.

32. Pulls the thigh inward.

33. *Membranosus* ariseth from the upper and fore part of the spine of the ilium: its fleshy part terminates at the great trochanter, where its membranous begins, and spreading

33. Draws the leg and thigh outwards.



over the muscles of the thigh, passes to its insertion on the upper part of the tibia.

34. *Sartorius* rises with the former, and descending obliquely over the thigh, is inserted into the inner and upper part of the tibia.

35. *Gracilis* rises near the articulation of the os pubis, and is inserted into the upper and inner part of the tibia.

36. *Biceps Femoris* has two heads; one rising from the tuberosity of the ischium, the other from the linea aspera of the thigh bone: they both join, and are inserted by one tendon into the upper part of the fibula.

37. *Semimembranosus* arises from the hinder protuberance of the ischium, and is inserted into the inner part of the tibia, below its articulation with the fibula.

38. *Semimembranosus* rises from the upper protuberance of the ischium, and is inserted into the upper and back part of the tibia.

39. *Rectus Femoris* arises from the lower part of the spine of the ilium, and is inserted with the two following muscles.

40. *Vastus externus* arises from the great trochanter, and external part of the femur, and is inserted with the

41. *Vastus internus*, which arises from the lesser trochanter, and internal part of the femur. These three muscles make one strong tendon, just above the knee, and passes over the patella, to which it adheres, and

34. Crosses the legs in the manner tailors sit; from whence its name.

35. Helps to bend the leg, and assist in bringing it, and the thigh, inwards.

36. Helps to bend the leg, and is employed in turning the leg and foot outward, when we sit down.

37. Helps to bend the leg.

38. Helps to bend the leg.

These four last muscles generally act together, and make but one mass, which appear like one muscle, especially about the middle of the thigh.

These muscles extend the leg. When a figure stands on one leg, there appear above the knee certain swellings, which are made by the tendon of these three muscles, and the skin. As soon as the knee bends, they disappear.

39

40

41

is inserted into the upper part of the tibia.

42. *Tibialis anticus* ariseth from the upper and outer part of the tibia, and is inserted into the os cuneiforme and os metatarsi.

42. Bends the foot.

43. *Gastrocnemius* has two distinct fleshy originations from the hind part of the protuberance of the thigh bone. In its descent they are dilated into two fleshy bellies; the innermost is thickest and largest; they, joining together, make a broad strong tendon, which joins with the tendon of the *solæus*, and is inserted with it.

43 } These extend the  
44 } foot. The action  
of these muscles is  
very necessary in  
walking, running,  
leaping, and stand-  
ing on tip-toe; and  
those who walk or  
run much, or car-  
ry heavy burdens,  
have these muscles  
larger than others.

44. *Soleus* arises from the upper and back part of the tibia and fibula, and increases to a fleshy belly, which lies under the former muscle, and terminating in a very strong tendon (by some called the cord of Achilles), and is inserted into the hinder part of the os calcis.

45. *Peroneus* arises from the upper and outer part of the fibula, and passing under the channel of the outer ankle, is inserted into the outer bone of the metatarsus.

45. Draws the foot outwards.

46. *Extensor Digitorum Pedis* ariseth from the upper part of the tibia, and is inserted into the bones of the toes.

46. Extends the toes.

## Fig. IX.

## Use.

- a. Corrugator Supercilii* arises fleshy from the internal angular process of the os frontis, above the joining of the os nasi, and nasal process of the superior maxillary bone; from thence it runs outwards, and a little upwards.

Inserted into the inner and inferior fleshy part of the occipito-frontalis muscle, where it joins with the orbicularis palpebrarum, and extends outwards as far as the middle of the superciliary ridge.

- b. Temporalis* arises fleshy from a semicircular ridge of the lower and lateral part of the parietal bone, from all the pars squamosa of the temporal bone, from the external angular process of the os frontis, from the temporal process of the sphenoid bone, and from an aponeurosis which covers it. From these different origins the fibres descend like radii towards the jugum, under which they pass; and are

Inserted by a strong tendon into the upper part of the coronoid process of the lower jaw; in the duplicature of which tendon this process is enclosed as in a sheath, being continued down all its fore part to near the last dens molaris.

- c. Masseter* arises by strong tendinous and fleshy fibres, which runs in different directions from the superior maxillary bone, where it joins the os malæ; and from the inferior and interior part of the zygoma, its whole length, as far back as the tubercle before the socket for the condyle of the lower jaw; the external fibres slanting backwards and the internal forwards.

- a.* To draw the eye-brow of that side towards the other, and make it project over the inner canthus of the eye. When both act, they pull down the skin of the forehead, and make it wrinkle, particularly between the eye-brows.

- b.* To pull the lower jaw upwards, and press it against the upper; at the same time drawing it a little backwards.

- c.* To pull the lower to the upper jaw, and by means of its oblique decussation, a little forwards and backwards.

Inserted into the angle of the lower jaw, and from that upwards to near the top of its coronoid process.

- d. *Levator Anguli Oris* arises thin and fleshy, from the hollow of the superior maxillary bone, between the root of the socket of the first dens molaris, and the foramen infra-orbitarium.

Inserted into the angle of the mouth and under lip, where it joins with its antagonist.

- e. *Buccinator* arises tendinous and fleshy, from the lower jaw, as far back as the last dens molaris, and fore part of the root of the coronoid process: fleshy from the upper jaw, between the last dens molaris and pterygoid process of the sphenoid bone; from the extremity of which it arises tendinous, being continued between both jaws to the constrictor pharyngis superior, with which it joins: from thence proceeding with straight fibres, and adhering close to the membrane that lines the mouth, it is

Inserted into the angle of the mouth within the orbicularis oris.

- f. *Depressor Labii Inferioris* arises broad and fleshy, intermixed with fat from the inferior part of the lower jaw, next the chin; runs obliquely upwards, and is

Inserted into the edge of the under lip; extends along one half of the lip, and is lost in its red part.

- g. *Levator Scapulae* arises tendinous and fleshy from the transverse processes of the five superior vertebræ of the neck, by as many distinct slips, which soon unite to form a muscle that runs downwards and outwards.

- d. To draw the corner of the mouth upwards, and make that part of the cheek opposite to the chin prominent, as in smiling.

- e. To draw the angle of the mouth backwards and outwards, and to contract its cavity, by pressing the cheek inwards, by which the food is thrust between the teeth

- f. To pull the under lip, and the skin of the side of the chin downwards, and a little outwards.

- g. To pull the scapula upwards, and a little forwards.

Inserted fleshy into the superior angle of the scapula.

- g. *Subclavius* arises tendinous from the cartilage that joins the first rib to the sternum.

Inserted, after becoming fleshy, into the inferior part of the clavicle, which it occupies from within an inch or so of the sternum, as far outwards as to its connexion by ligament with the coracoid process of the scapula.

- h. *Pectoralis Minor* arises tendinous and fleshy from the upper edge of the third, fourth, and fifth ribs, near where they join with their cartilages.

Inserted, tendinous, into the coracoid process of the scapula; but soon grows fleshy and broad.

- i. *Obliquus Ascendens* arises from the spine of the ilium, the whole length between the posterior and superior anterior spinous process; from the os sacrum and the three undermost lumbar vertebræ, by a tendon common to it, and to the serratus psoicus inferior muscle; from Poupart's ligament, at the middle of which it sends off the beginning of the cremaster muscle; and the spermatic cord in the male, or round ligament of the womb; passes under its thin edge, except a few detached fibres.

Inserted into the cartilago ensiformis, into the cartilage of the seventh, and those of all the false ribs; but at the upper part it is extremely thin, resembling a cellular membrane, and only becomes fleshy at the cartilage of the tenth rib. Here its tendon divides into two layers; the anterior layer, with a great portion of the inferior part of the posterior layer, joins

- h. To pull the clavicle downwards and forwards.

- i. To bring the scapula forwards and downwards, or to raise the ribs upwards.

- k. To assist the obliquus descendens externus.

the tendon of the external oblique, and runs over the rectus, to be inserted into the whole length of the linea alba. The posterior layer joins the tendon of the transversalis muscle, as low as half way between the umbilicus and os pubis: but below this place, only a few fibres of the posterior layer are seen, and the rest of it passes before the rectus muscle, and is inserted into the linea alba; so that the whole tendon of the external oblique muscle, with the anterior layer of the internal oblique, passes before the rectus muscle, and is inserted into the linea alba.

- l. Pyramidalis* arises along with the rectus; and running upwards within the same sheath is

Inserted by an acute termination near half way between the os pubis and umbilicus, into the linea alba and inner edge of the rectus muscle. It is frequently wanting in both sides, without any inconvenience.

- m. Flexor Perforatus* arises tendinous and fleshy from the internal condyle of the os humeri; tendinous from the coronoid process of the ulna, near the edge of the cavity that receives the head of the radius: fleshy from the tubercle of the radius, and membranous and fleshy from the middle of the fore part of the radius, where the flexor pollicis longus arises. Its fleshy belly sends off four round tendons before it passes under the ligament of the wrist.

Inserted into the anterior and upper part of the second bone of each finger, being near the extremity of the first bone, divided for the passage of the perforans.

*Ligamentum Annulare.*

- l.* Seems to be to assist the inferior part of the rectus.

- m.* To bend the second joint or phalanx of the fingers.

Use. Confines the flexor tendons of the hand.

*n. Iliacus*

- π. Iliacus Internus* arises fleshy from the transverse process of the last vertebra of the loins, from all the inner lip of the spine of the os ilium, from the edge of that bone between its anterior superior spinous process and the acetabulum, and from most of the hollow part of the ilium. It joins with the psoas magnus (a muscle seated within the loins), where it begins to become tendinous; and is
- Inserted along with it.
- ο. Cruralis* arises fleshy from between the two trochanters of the os femoris; but nearer the minor, and firmly adhering to most of the fore part of the os femoris, and connected to both vasti muscles.
- Inserted, tendinous, into the upper part of the patella, behind the rectus.

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Fig. X.

- a. Complexus* arises from the transverse processes of the seven superior vertebræ of the back, and four inferior of the neck, by as many distinct tendinous origins; in its ascent it receives a fleshy slip from the spinous process of the first vertebra of the back. From these different origins it runs upwards, and is every where intermixed with tendinous fibres; it is
- Inserted, tendinous and fleshy, into the inferior edge of the protuberance in the middle of the os occipitis, and into a part of the curved line that runs forward from the protuberance.
- b. Splenius Capitis* arises tendinous from the four superior spinous processes of the vertebræ of the back; tendinous and fleshy, from the five inferior of the neck; and adheres firmly to the ligamentum nuchæ. At the third vertebra of the neck,
- η. To assist the psoas* in bending the thigh, and to bring it directly forwards.
- ο. To assist in the extension of the leg.*
- a. To draw the head backwards, and to one side; and, when both act, to draw the head directly backwards.*
- b. To bring the head and upper vertebra of the neck backwards laterally; and when both act, to pull the*



the splenii recede from each other, so that part of the complexus muscle is seen.

Inserted by as many tendons, into the five superior transverse processes of the vertebræ of the neck; and tendinous and fleshy into the posterior part of the mastoid process, and into the os occipitis, where it joins with the root of that process.

head directly backwards.

c. *Rhomboides*. 1. *Rhomboides major* arises tendinous from the spinous processes of the five superior vertebræ of the back. Inserted into all the basis of the scapula below its spine.

c. To draw the scapula obliquely upwards, and directly inwards.

2. *Rhomboides minor* arises tendinous from the spinous processes of the three inferior vertebræ of the neck, and from the ligamentum nuchæ.

To assist the former.

Inserted into the base of the scapula, opposite to its spine.

d. *Supra-Spinatus* arises fleshy from all that part of the base of the scapula that is above its spine: also from the spine and superior costa; passes under the acromion, and adheres to the capsular ligament of the os humeri.

d. To raise the arm upwards, and at the same time to pull the capsular ligament from between the bones, that it may not be pinched.

Inserted tendinous into that part of the large protuberance on the head of the os humeri that is next the groove for lodging the tendon of the long head of the biceps.

*Serratus Posterior Inferior* arises by a broad thin tendon, in common with that of the latissimus dorsi, from the spinal processes of the two inferior vertebræ of the back, and from the three superior of the loins.

e. To depress the ribs into which it is inserted.

Inserted into the lower edges of the four inferior ribs, at a little distance from their cartilages, by as many distinct fleshy lips.

f. *Triceps Extensor Cubiti* arises by three heads, the first called longus, pretty broad and

f. To extend the fore-arm.  
tendinous,



tendinous, from the inferior costa of the scapula, near its cervix; the second head, called *brevis*, arises by an acute, tendinous, and fleshy beginning, from the back part of the os humeri, a little below its head, outwardly. The third, called *brachialis externus*, arises by an acute beginning from the back part of the os humeri. These three heads unite lower than the insertion of the *teres major*, and cover the whole posterior part of the humerus, from which they receive addition in their descent.

Inserted into the upper and external part of the process of the ulna, called *olecranon*, and partly into the condyles of the os humeri, adhering firmly to the ligament.

g. *Gemini* arises by two distinct origins; the superior from the spinous process, and the inferior from the tuberosity of the os ischium: also, from the posterior sacro-schiatric ligament. They are both united by a tendinous and fleshy membrane, and form a purse for the tendon of the *obturator internus* muscle.

Inserted, tendinous and fleshy, into the cavity at the inner side of the root of the trochanter major, on each side of the tendon of the *obturator internus*, to which they firmly adhere.

h. *Quadratus Femoris* arises tendinous and fleshy from the outside of the tuberosity of the os ischium; and running transversely, is

Inserted, fleshy, into a rough ridge, continued from the root of the large trochanter to the root of the small one.

g. To roll the thigh outwards, and to preserve the tendon of the *obturator internus* from being hurt by the hardness of that part of the ischium over which it passes; also, to hinder it from starting out of its place while the muscle is in action.

h. To roll the thigh outwards.

## Fig. XI.

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|---|---|
| <p>i. <i>Trachelo-Mastoidæus</i> arises from the transverse processes of the three uppermost vertebræ of the back, and from the five lowermost of the neck, where it is connected to the transversalis cervicis, by as many thin tendons, which unite into a belly, and run up under the splenius.</p> <p>Inserted into the middle of the posterior side of the mastoid process, by a thin tendon.</p> <p>k. <i>Coraco-Brachialis</i> arises tendinous and fleshy from the fore part of the coracoid process of the scapula, adhering in its descent to the short head of the biceps.</p> <p>Inserted, tendinous and fleshy, about the middle of the internal part of the os humeri, near the origin of the third head of the triceps, called brachialis externus, where it sends down a thin tendinous expansion to the internal condyle of the os humeri.</p> <p>l. <i>Extensor Radialis Brevior</i> arises, tendinous, from the external condyle of the os humeri, and from the ligament that connects the radius to it, and runs along the outside of the radius.</p> <p>Inserted by a round tendon into the upper and back part of the metacarpal bone that sustains the middle finger.</p> <p>m. <i>Supinator Radii Brevis</i> arises, tendinous, from the external condyle of the os humeri; tendinous and fleshy, from the external and upper part of the ulna, and adheres firmly to the ligament that joins these two bones.</p> <p>Inserted into the head, neck, and tubercle of the radius, near the insertion of the biceps, and ridge running from that downwards and outwards.</p> | <p>i. To assist the complexus; but it pulls the head more to the side.</p> <p>k. To raise the arm upwards and forwards.</p> <p>l. To assist the last-mentioned muscle.</p> <p>m. To roll the radius outwards, and so bring the hand supine.</p> |
|---|---|

n. *Spinalis Dorsi* arises from the spinous processes of the two uppermost vertebræ of the loins, and the three inferior of the back, by as many tendons.

Inserted into the spinous processes of the nine uppermost vertebræ of the back, except the first, by as many tendons.

o. *Gluteus Minimus* arises fleshy from a ridge that is continued from the superior anterior spinous process of the os ilium, and from the middle of the dorsum of that bone, as far back as its great notch.

Inserted by a strong tendon into the fore and upper part of the trochanter major.

p. *Obturator Internus* arises from more than one half of the internal circumference of the foramen thyroideum, formed by the os pubis and ischium; its inside is covered by a portion of the levator ani, and appears to be divided into a number of fasciculi, which unite and form a roundish tendon, that passes out of the pelvis, between the posterior sacro-ischiatic ligament and tuberosity of the os ischium, where it passes over the capsular ligament of the thigh bone; it is enclosed as in a sheath, by the gemini muscles.

Inserted by a round tendon into the large pit at the root of the trochanter major.

q. *Popliteus* arises by a round tendon from the lower and back part of the external condyle of the os femoris; then runs over the ligament that involves the joint, firmly adhering to it, and part of the semilunar cartilage. As it runs over the joint, it becomes fleshy, and the fibres run obliquely inwards, being covered with a thin tendinous membrane.

n. To erect and fix the vertebræ, and to assist in raising the spine.

o. To assist in pulling the thigh outwards and backwards, and in rolling it.

p. To roll the os femoris obliquely outwards.

q. To assist in bending the leg, and to prevent the capsular ligament from being pinched. After the leg is bent, this muscle serves to roll it inwards.

Inserted broad, thin, and fleshy, into a ridge at the upper and internal edge of the tibia, a little below its head.

r. *Tibialis Posticus* arises by a narrow fleshy beginning from the fore and upper part of the tibia, just under the process which joins it to the fibula; then passing through a perforation in the upper part of the interosseous ligament, it continues its origin from the back part of the fibula, next the tibia, and from near one half of the upper part of the last-named bone; as also from the interosseous ligament, the fibres running towards a middle tendon, which sends off a round one that passes in a groove behind the malleolus internus.

Inserted, tendinous, into the upper and inner part of the os naviculare, being further continued to the os cuneiforme internum and medium; besides, it gives some tendinous filaments to the os calcis, os cuboides, and to the root of the metatarsal bone that sustains the middle toe.

s. *Flexor Longus Dig. Pedis* arises by an acute tendon, which soon becomes fleshy, from the back part of the tibia, some way below its head, near the entry of the medullary artery; which beginning, is continued down the inner edge of this bone, by short fleshy fibres, ending in its tendon: also, by tendinous and fleshy fibres, from the outer edge of the tibia; and between this double order of fibres the tibialis posticus muscle lies enclosed. Having passed under two annular ligaments, it then passes through a sinuosity at the inside of the os calcis, and about the middle of the sole of the foot divides it into four tendons, which pass through the

r. To extend the foot, and to turn the toes inwards.

s. To bend the last joint of this toe.

flits of the perforatus; and just before its division, it receives a considerable tendon from that of the flexor pollicis longus.

Inserted into the extremity of the last joint of the four lesser toes.

- t. *Flexor Pollicis Longus* arises by an acute, tendinous, and fleshy beginning, from the posterior part of the fibula, some way below its head, being continued down the same bone, almost to its inferior extremity, by a double order of oblique fleshy fibres; its tendon passes under an annular ligament at the inner ankle.

Inserted into the last joint of the great toe, and generally sends a small tendon to the os calcis.

- t. To bend the last joint of the toes.

Fig. XII.

- 1\* *Depressor Labii Sup. Alaeq. Nasi* arises thin and fleshy from the os maxillare superius, immediately above the joining of the gums with the two dentes incisivi, and the dens caninus; from thence it runs up under part of the levator labii superioris alaeque nasi.

Inserted into the upper lip and root of the ala nasi.

- 2\* *Orbicularis Oris*. This muscle is in a great measure formed by the muscles that move the lips: the fibres of the superior descending, those of the inferior ascending, and decussating each other about the corner of the mouth, run along the lip to join those of the opposite side, so that the fleshy fibres appear to surround the mouth like a sphincter;

- 1\* To draw the upper lip and ala nasi downwards and backwards.

- 2\* To shut the mouth, by contracting and drawing both lips together, and to counteract all the muscles that assist in forming it.

- 3\* *Sterno-Thyroidæus* arises fleshy from the whole edge of the uppermost bone of the sternum internally, opposite to the cartilage of the first rib, from which it receives a small part of its origin.

Inserted into the surface of the rough line, at the external part of the inferior edge of the thyroid cartilage.

- 4\* *Scalenus Anticus* arises from the fourth, fifth, and sixth transverse processes of the first vertebra of the neck, by as many tendons.

Inserted, tendinous and fleshy, into the upper side of the first rib, near its cartilage.

- 5\* *Subscapularis* arises fleshy from all the base of the scapula internally, and from its superior and inferior costa: being composed of a number of tendinous and fleshy fasciculi, which make prints on the bone, they all join together, fill up the hollow of the scapula, and pass over the joint, adhering to the capsular ligament.

Inserted, tendinous, into the upper part of the internal protuberance at the head of the os humeri.

- 6\* *Intercostales ext. & int.* arise from the inferior acute edge of each superior rib, and run obliquely forwards, the whole length from the spine to near the joining of the ribs with their cartilages; from which, to the sternum, there is only a thin membrane covering the internal intercostals; which arise in the same manner as the external, but they begin at the sternum, and run obliquely backwards, as far as the angle of the rib; and from that to the spine they are wanting.

- 3\* To draw the larynx downwards.

- 4\* To bend the neck to one side; or, when the neck is fixed, to elevate the ribs, and to dilate the thorax.

- 5\* To roll the humerus inwards, and to draw it to the side of the body; and to prevent the capsular ligament from being pinched.

- 6\* By means of the intercostal muscles, the ribs are equally raised upwards during inspiration.— Their fibres being oblique, give them a greater power of bringing the ribs nearer each other, than could be performed by straight ones; but by the  
Inserted



Inserted into the upper obtuse edge of each inferior rib, as far back as the spine, into which the posterior portion is fixed.

obliquity of the fibres they are almost brought contiguous; and as the fixed points of the ribs are before and behind, if the external had been continued forwards to the sternum, and the internal backwards to the spine, it would have hindered their motion, which is greatest in the middle, though the obliquity of the ribs renders it less perceptible.

#### 7\* *Tendinous Expansions.*

3\* *Transversalis Abdominis* arises tendinous, but soon becoming fleshy from the inner or back part of the cartilages of the seven lower ribs, where some of its fibres are continued with those of the diaphragm and the intercostal muscle, by a broad thin tendon, connected to the transverse processes of the last vertebra of the back, and the four superior vertebrae of the loins; fleshy from the whole spine of the os ilium internally, and from the tendon of the external oblique muscle, where it intermixes with some fibres of the internal oblique.

Inserted into the cartilago ensiformis, and into the whole length of the linea alba, excepting its lowermost part.

9\* *Obturator Externus* arises fleshy from the lower part of the os pubis, and fore part of the inner crus of the ischium; surrounds the foramen thyroideum; a number of its fibres, arising from the membrane which fills up that foramen, are collected like rays towards a centre, and

8\* To support and compress the abdominal bowels; and it is so particularly well adapted for the latter purpose, that it might be called the proper constrictor of the abdomen.

9\* To roll the thigh bone obliquely outwards, and to prevent the capsular ligament from being pinched behind.

pass outwards around the root of the back part of the cervix of the os femoris.

Inserted, by a strong tendon, into the cavity at the inner and back part of the root of the trochanter major, adhering in its course to the capsular ligament of the thigh bone.

10\* *Adductores Femoris*. Under this appellation are comprehended three distinct muscles.

1. *Adductor Longus Femoris* arises by a pretty strong roundish tendon, from the upper and interior part of the os pubis, and ligament of its synchondrosis, on the inner side of the pectinalis.

Inserted, tendinous, near the middle of the posterior part of the linea aspera, being continued for some way down.

2. *Adductor Brevis Femoris* arises tendinous from the os pubis, near its joining with the opposite os pubis, below and behind the former.

Inserted, tendinous and fleshy, into the inner and upper part of the linea aspera, from a little below the trochanter minor, to the beginning of the insertion of the adductor longus.

3. *Adductor Magnus Femoris* arises a little lower down than the former, near the symphysis of the ossa pubis, tendinous and fleshy: from the tuberosity of the os ischium, the fibres run outwards and downwards.

Inserted into almost the whole length of the linea aspera, into a ridge above the internal condyle of the os femoris, and by a roundish long tendon, into the upper part of that condyle, a little above which the femoral artery takes a spiral turn towards the ham, passing between this muscle and the bone.

10\* These three muscles, or triceps, bring the thigh inwards and upwards, according to the different directions of their fibres; and in some degree roll the thigh outwards.



11\* *Biceps Flexor Cruris* arises by two distinct heads; the first, called longus, arises in common with the semitendinosus, from the upper and posterior part of the tuberosity of the os ischium. The second, called brevis, arises from the linea aspera, a little below the termination of the glutæus maximus, by a fleshy acute beginning, which soon grows broader as it descends to join with the first head, a little above the external condyle of the os femoris.

Inserted by a strong tendon into the upper part of the head of the fibula.

12\* *Extensor Brevis Dig. Pedis* arises fleshy and tendinous from the fore and upper part of the os calcis, and soon forms a fleshy belly, divisible into four portions, which sends off an equal number of tendons, that pass over the upper part of the foot, under the tendons of the former.

Inserted by four slender tendons into the tendinous expansion from the extensor longus, which covers the small toes, except the little one: also into the tendinous expansion from the extensor pollicis that covers the upper part of the great toe.

13\* *Tendo Tibialis Posterioris*. The tibialis posterioris arises by a narrow fleshy beginning, from the fore and upper part of the tibia, just under the process which joins it to the fibula; then passing through a perforation in the upper part of the interosseous ligament, it continues its origin from the back part of the fibula, next the tibia, and from near one half of the upper part of the last-named bone; as also from the interosseous ligament, the fibres running towards a middle tendon, which

11\* To bend the leg.

N. B. This muscle forms what is called the outer hamstring. Between it and the inner, the popliteal nerve, artery, and vein are situated.

12\* To extend the toes.

13\* To extend the foot, and to turn the toes inwards.

sends off a round one that passes in a groove behind the malicohus internus.

Inserted, tendinous, into the upper and inner part of the os naviculare, being further continued to the os cuneiforme internum and medium; besides, it gives some tendinous filaments to the os calcis, os cuboides, and to the root of the metatarsal bone that sustains the middle toe.

FINIS.



sends off a round one that passes in a groove behind the malicollis internus.

Inserted, tendinous, into the upper and inner part of the os naviculare, being further continued to the os cuneiforme internum and medium; besides, it gives some tendinous filaments to the os calcis, os cuboides, and to the root of the metatarsal bone that sustains the middle toe.

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TEXT IN

GUTTERS

